

Warm Up

Edit

Reset

?

Rational

Irrational

sq rt of 13

58.6192743...

9.038217...

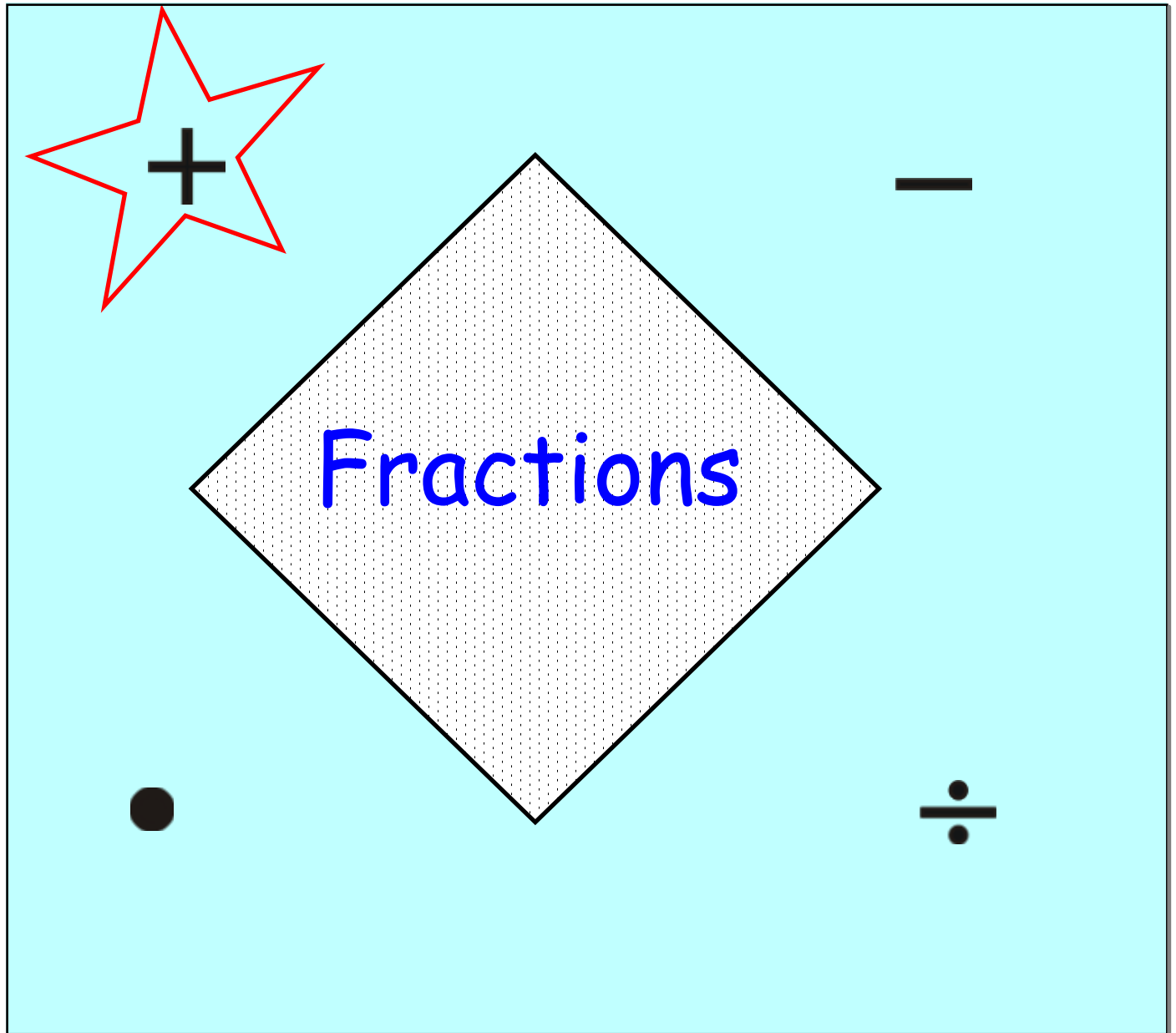
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0.87878787 ...

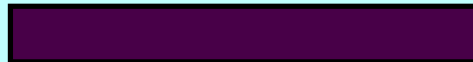
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3.07



Adding Fractions

You MUST get



Make equivalent fractions
(find a number that both
denominators can go into).

$$\begin{array}{r} \frac{3}{4} \\ + \frac{4}{5} \\ \hline \end{array}$$

Adding Fractions

Examples:

$$\begin{array}{r} 1) \quad \frac{7}{9} \\ + \frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 2\frac{2}{3} \\ + 1\frac{2}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 7\frac{4}{7} \\ + 3\frac{5}{6} \\ \hline \end{array}$$

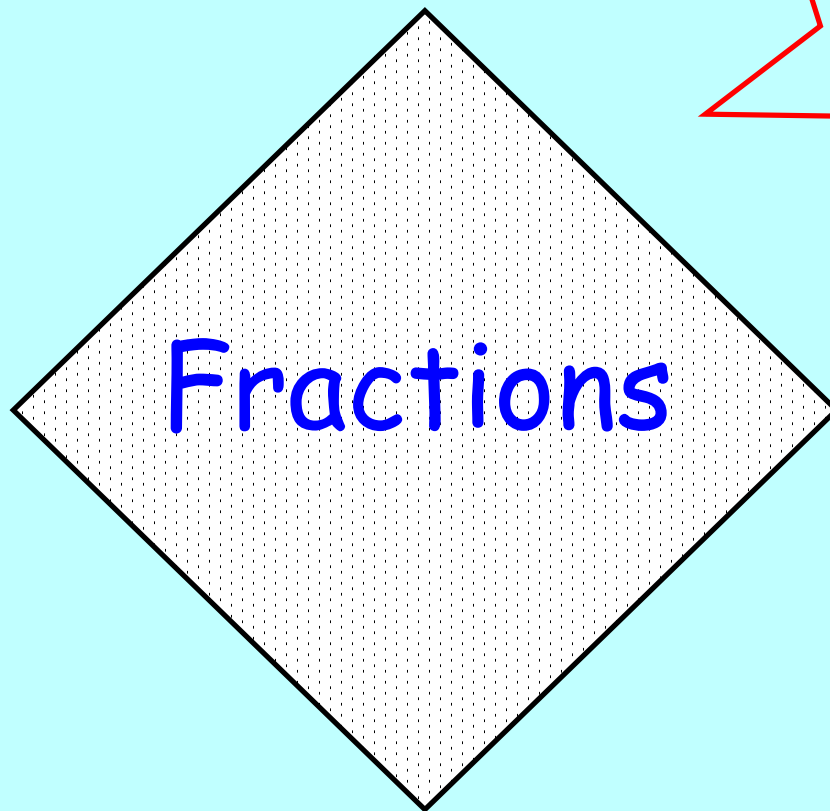
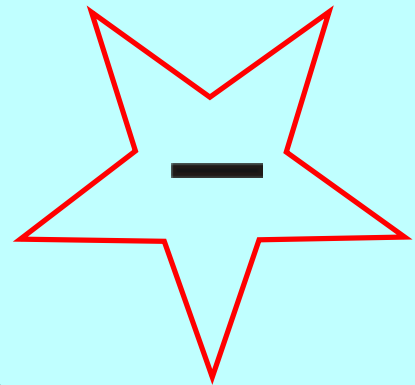
SOLVE

1. $x - 6\frac{1}{5} = 13\frac{7}{10}$

2. $x - 4\frac{3}{4} = 2\frac{1}{2}$

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Subtracting Fractions

You **MUST** get common denominators!

Only **TWO** differences between adding and subtracting.



1) You subtract
instead of add.



2) You might need
to borrow from the
whole number.

Examples:

$$\begin{array}{r}
 1) \quad 7\frac{3}{4} \oplus \frac{3}{4} \\
 - \quad 3\frac{1}{2} \ominus \frac{2}{4} \\
 \hline
 4\frac{1}{4}
 \end{array}$$

$$\begin{array}{r}
 2) \quad 14\frac{11}{12} \\
 - \quad 9\frac{1}{5} \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 3) \quad 8\frac{2}{3} \ominus \frac{6}{9} \\
 - \quad 6\frac{5}{9} \oplus \frac{5}{9} \\
 \hline
 2\frac{1}{9}
 \end{array}$$

Examples:

$$4) \quad 2\frac{1}{15} - \frac{1}{5} = \frac{14}{15}$$

$$5) \quad 11\frac{7}{7} - 3\frac{4}{7} = 7\frac{3}{7}$$

$$6) \quad 9\frac{5}{6} - 7\frac{5}{18} = 2\frac{10}{18}$$

$$2\frac{10}{18} = 2\frac{5}{9}$$

Solve

1.

$$5\frac{5}{6} = m + 3\frac{1}{3}$$

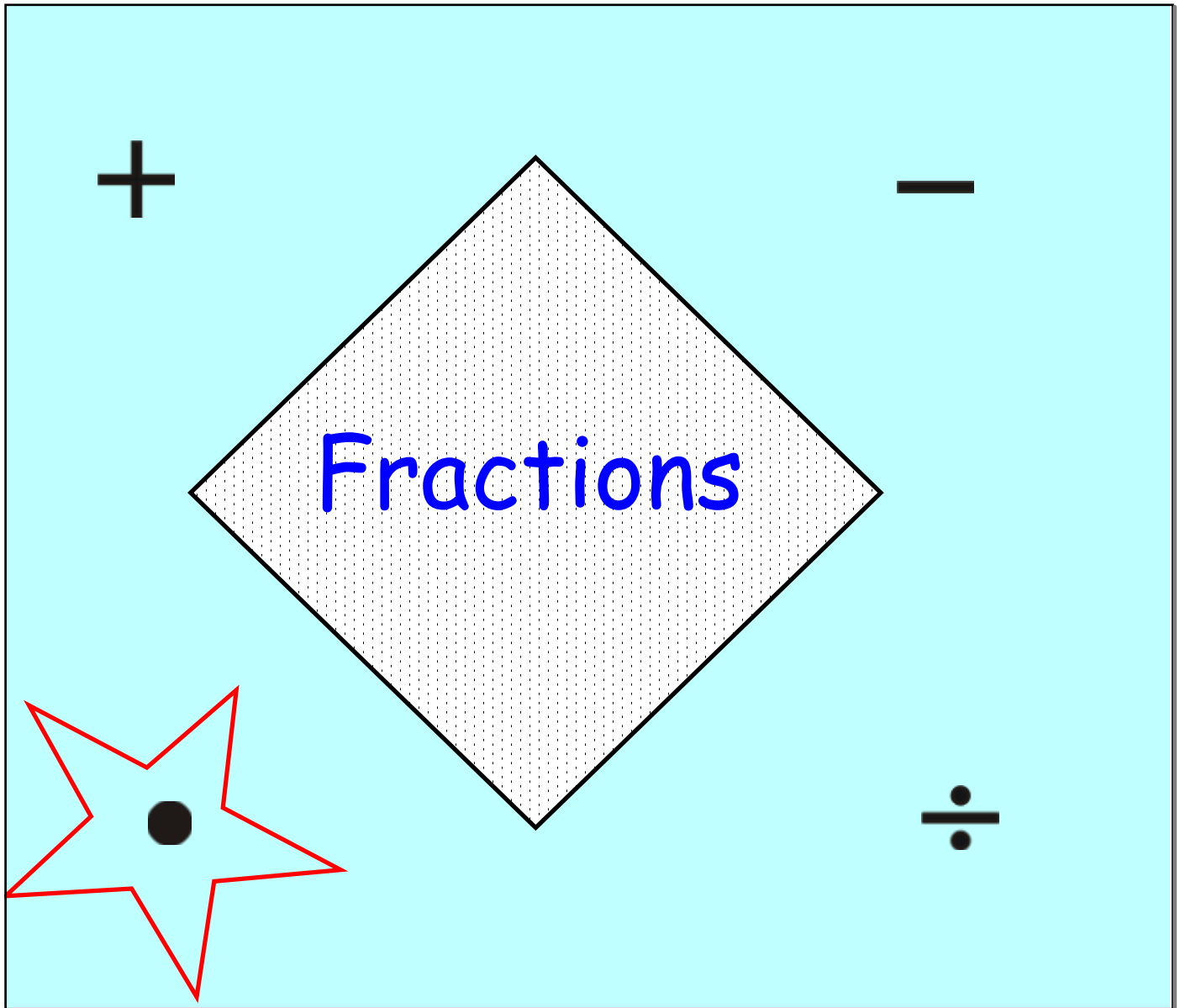
2.

$$m + 4\frac{3}{4} = 9\frac{1}{2}$$

$$8\frac{1}{10}$$

$$- 2\frac{3}{5}$$

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Multiplying Fractions

YEA! NO common denominators for multiplying!



There are 2 different ways to solve multiplication. You pick the one that makes sense to you!

Method #1 - Multiply then simplify

Step 1 **Convert all mixed numbers and whole numbers into improper fractions.**

Step 2 **Multiply the numerators.**

Step 3 **Multiply the denominators.**

Step 4 **Simplify.**

$$1) \frac{1}{3} \bullet \frac{4}{11}$$

$$2) 3\frac{3}{5} \bullet 6\frac{1}{2}$$

What should I consider about this method?

Pro: simple

Con: could end up with large numbers

Method #2 - Cross simplifying

- Step 1** **Convert all mixed numbers and whole numbers into improper fractions.**
- Step 2** **Cross simplify.**
- Step 3** **Multiply the numerators.**
- Step 4** **Multiply the denominators.**
- Step 5** **Simplify.**

$$3) \ 2\frac{2}{7} \bullet 4\frac{3}{8}$$

$$4) \ 7 \bullet 2\frac{1}{4}$$

What should I consider about this method?

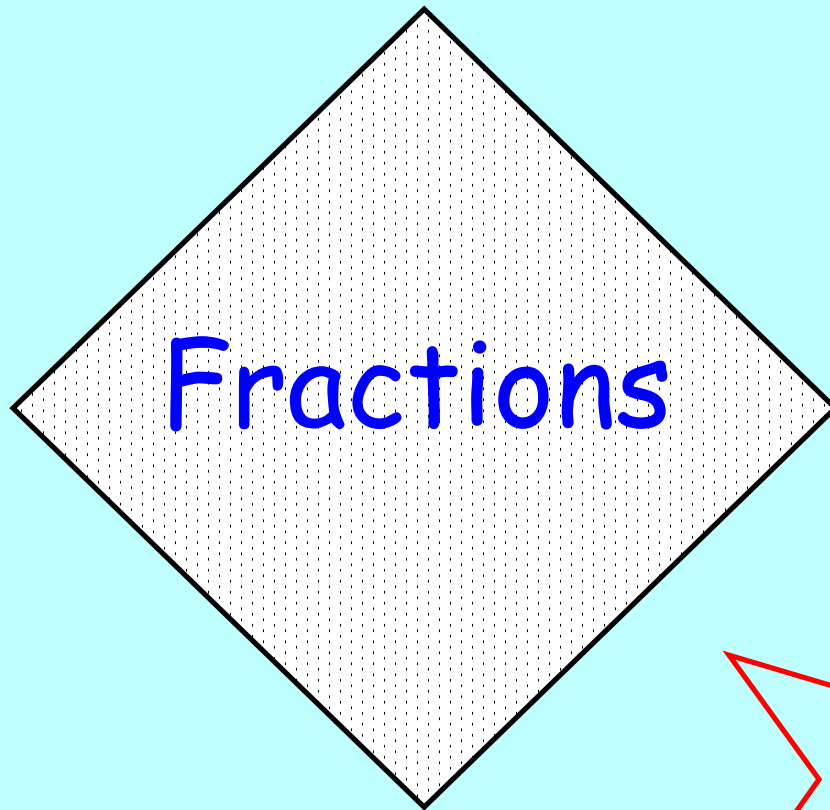
Pro: less/smaller simplifying in the end

Con: some find it confusing

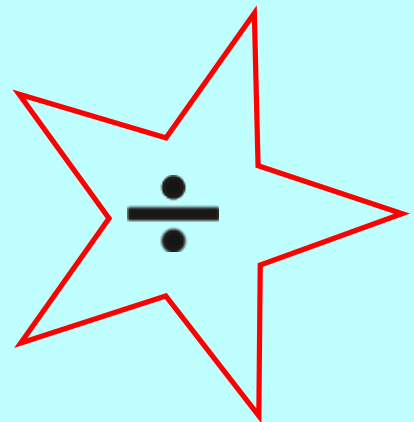
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Dividing Fractions

YEA! NO common denominators for dividing!



- Step 1** **Convert mixed numbers and whole numbers into improper fractions.**
- Step 2** **Leave first fraction alone.**
- Step 3** **Change division to multiplication.**
- Step 4** **Get the reciprocal of the second number (flip the second fraction).**
- Step 5** **Follow your multiplication steps.**

Examples:

$$1) \frac{5}{6} \div 2\frac{1}{4}$$

$$2) 4 \div 2\frac{5}{6}$$

$$3) 8\frac{1}{7} \div 4$$

$$4) 10\frac{1}{3} \div 5\frac{2}{5}$$

Flip It

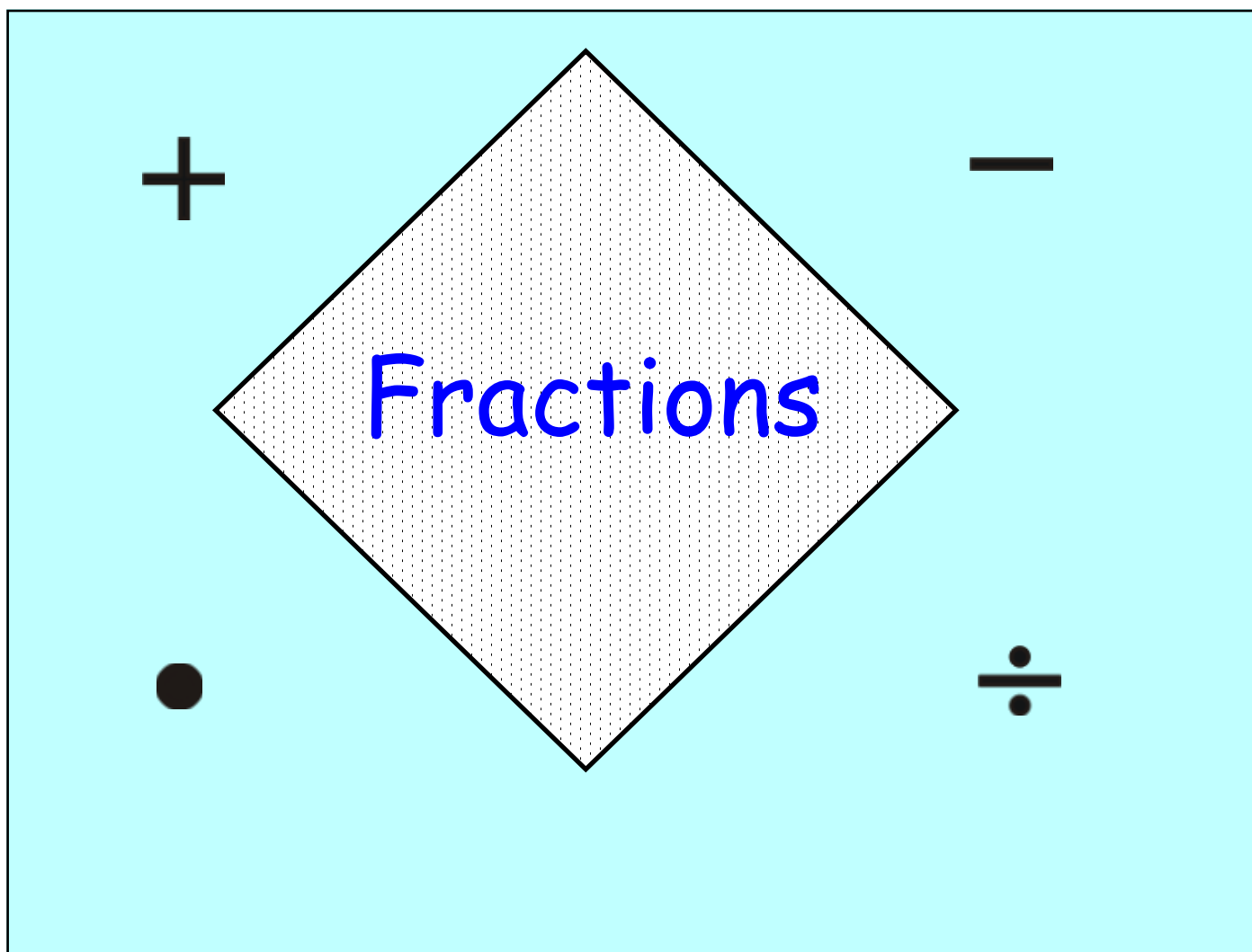
Flip that frac
Flip the second frac
Go ahead and flip
C'mon don't you slack

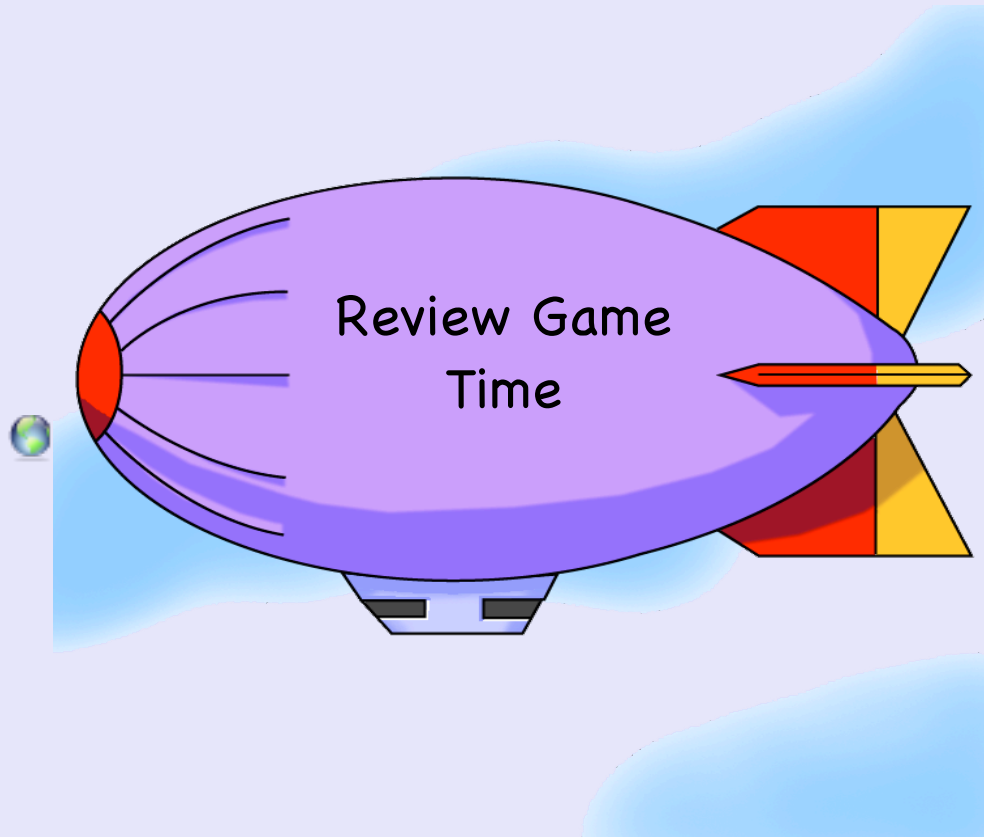
When division comes along – **you must flip it**
Now division can't go on – **unless you flip it**
Your answer will be wrong – **if you don't flip it**

Flip it
Into shape
Shape it up
Get straight
Go forward
Move ahead
Try to divide it
It's not too late
To flip it
Flip it good



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